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Planting Seeds

Annual

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Report Highlights:

In 2003, South Africa's seed industry started to implement the vision of the National Agricultural Strategy (2001), by certifying pollinated seed varieties from emerging farmers. The 2001 labeling requirements for GMO products is still under review. The South African seed industry mainly imports vegetable seeds for re-exports to neighboring countries. The government is expected to review the phytosanitary import requirements, in order to ensure more seed imports. South Africa intends to explore new African seed markets for exports.

Includes PSD changes: No
Includes Trade Matrix: No
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Executive Summary

The South African National Seed Organization (SANSOR) regulates seed certification, which is voluntary, and is issued largely for superior quality and disease-free seeds. SANSOR does not regulate imported seeds, and the industries serves as hubs for imported vegetable seeds, which are re-exported to neighboring countries. Expectations are a review of phytosanitary import requirement to ensure more seed imports, to sustain food self-sufficiency in the African continent. The 2001 proposal by the Department of Health on labeling requirements for GMO products is still under review.

In 2003, SANSOR provided a College its first membership aimed for the emerging sector. Concurrently, SANSOR also provided a certificate to the first open pollinated maize variety (ZN 521) produced by a smallholder farmer. This is in line with the vision of the government's National Agricultural Strategy of 2001, of promoting the standard of open pollinated varieties in South Africa.

South African seed industry aims to keep Europe as its major market, whilst venturing in exploring new African markets.

Historical Perspectives

South Africa's first private seed companies were established in the 1890's, with the first public maize-breeding project initiated in 1905. The maize breeding led to a synthetic variety, Kalahari Early Pearl, which became a regional best seller in the 40s and 50s.

These led to the establishment of the Seedsmen's Association of SA in 1943, followed by SA Hybrid Maize Seed Organization (SABO) in 1960, the SA Plant Breeders' Association in 1967, the SA Forage Seeds Association in 1980, and the Seed Analysts Association of SA in 1981. These associations joined forces to establish South African National Seed Organization (SANSOR) in 1989, a spokesbody for the seed industry.

SANSOR makes extensive use of national crop group and technical committees whose members are elected from the industry. The industry, comprising 70 seed companies, cooperatives and farmer seed merchants, as well as over 500 distributors and agencies, ensure fair seed prices, ongoing upgrading of quality standards to meet global requirements, and continuous introduction of new, improved varieties.

The industry is self-sufficient, with an average annual turn-over in seed sales of about US \$ 145 million, while exports amount to about US \$ 17 million and imports about US \$ 7 million. Agronomic field crops dominate the seed market with a share of about 70% with horticultural species at 21%, and forage/pastures at 9%.

Plant Breeders Rights

The Plant Breeders Right Act of 1976, amended in 1996 to meet the UPOV 1991 requirements, protects South African plant varieties. In December 2000, South Africa registered about 1,653 plant breeders, of which 40% are South African, with the remaining owned by US (15%), Dutch(12%), and Germans(11%).

Seed Certification

South Africa's seed certification is voluntary. Seed certification started as a system for vegetables devised by the government-private sector partnership around 1940, and was extended to other crops under the Seeds Act of 1961. The government coordinated all functions of certification until 1989, when all these functions were transferred to SANSOR. Since its inception, the volume of certified seed has doubled and the area planted to seeds extended to about 97,000 Ha.

SANSOR uses services of private inspectors, who though employed elsewhere, report to SANSOR. They are responsible for the maintenance of a sustainable, and cost-effective seed certification system. The system has been expanded to include phytosanitary field inspections for seed-borne pathogens. South Africa's seed testing is conducted at both private and official testing stations, however, official testing and issuing of official certificates remains SANSOR's responsibilities. In order for a private laboratory to qualify as a testing station, it must meet regulatory requirements, complete academic and practical training on seed analysis, and be accredited by SANSOR. This training is now offered by Technikon Pretoria since calendar year 2000. Currently, South Africa has a total of 26 registered private laboratories.

The Official Seed Testing Station has been a member of the International Seed Testing Association (ISTA) for almost 50 years. It exercises ongoing surveillance over private seed laboratories by way of inspections at laboratory facilities, oversees testing of seed samples and spot checks on commercial seed lots. SANSOR overlooks all the operations.

SANSOR decided to broaden its platform by looking to formally disadvantaged communities who are developing new seed varieties for new member. The first SANSOR membership from the emerging sector was recently awarded to Madzivhanila College of Agriculture. This new partnership coincided with the release of the first officially certified seed of an open pollinated maize variety (ZM521) produced by smallholder farmers. Approval for certification came about after a special protocol was introduced that allows open pollinated seed varieties of maize to be included with other industrialized cultivated varieties, modern hybrids and genetically modified seeds. This policy is in line with the National Strategic Vision on agriculture to promote the standard of open pollinated varieties in South Africa.

South Africa seed certification scheme issue certificates for both superior quality, and disease-free. For genetic quality, assessment is made for varietal type, with high requirements for field production, germination and physical purity. The guarantee proof of quality is the certificate, seal and blue label on the container. In the event of poor quality results after testings, the certificate is canceled and seals and labels are removed from containers.

For dry beans, laboratory testings are made for specific diseases which occurred during active growth of plants.

Biotechnology

In 1990, SAGENE, an advisory committee established in 1978 to guide government and seed industry on biotechnology, established biosafety guidelines for genetically modified varieties. About 110 research groups were already active in biotechnology R&D, with applications covering almost 160 agricultural projects. Currently, over 200 permits have been issued for field trials.

The Genetic Modified Organisms Act of 1997 was established to control all facilities where genetic modification research and development take place, all filed trials, imports, exports, and commercial releases. The Plant Pests Act of 1983 was the principal legislation which dealt with biotechnology issues used before the GMO Act was implemented.

South Africa's first Genetic Modified varieties approved for commercial production was Bt insect-resistant cotton in 1997, followed by Bt insect-resistant yellow maize in 1998, as well as herbicide-tolerant cotton and insect-resistant white maize in 2000. South Africa's Genetically Modified crop production area is estimated at about 200,000 Ha since 2001.

The 2001 proposal by South African Department of Health on labeling requirements for GMO products is still under review. The draft provides for mandatory labeling of food which differs significantly from conventional counterparts in nutritional value, composition, mode of storage, levels of allergens and toxins; as well as whether plant materials contain human or animal genes.

Production

Agronomic Crops

CROP	SALES VOLUMES IN METRIC TONS					
	1997	1998	1999	2000	2001	2002
Maize	26,600	26,136	29,083	24,396	24,396	27,244
Sunflower	2,146	3,477	1,633	2,187	2,400	2,300
Grain Sorghum	851	637	890	571	500	525
Dry Beans	1,552	2,592	2,831	3,070	3,838	4,375
Soybeans	4,375	4,567	3,242	4,567	8150	7,906
Groundnuts	1,773	2,836	2,448	4,925	8,209	4,761
Cotton	1,000	1,100	500	0	362	260
Cow Peas	240	240	240	240	600	600
Wheat	52,500	29,890	31,653	37,913	54,162	53,079
Oats	10,500	10,500	10,500	10,500	15,000	15,000
Barley	11,088	9,408	8,483	6,467	9,239	8,408
Rye	1,804	2,200	2,200	2,200	4,000	4,000
Triticale	4,620	4,620	4,620	4,620	8,400	8,400
Total	119,049	98,203	98,323	101,656	139,256	136,858

Horticultural Seeds

CROP	SALES VOLUME IN METRIC TONS		SALES VALUE IN MILLIONS OF RAND	
	2001	2002	2001	2002
Commodity	2001	2002	2001	2002
Beans	250	257	15	16.1
Beet	33	41	4.3	5.7
Brassicas	14	15.3	21	25.3
Cantaloupe	1.2	1.4	12.5	13.7
Carrot	100	121	15	18.2
Cucurbits	88	93	24	26.1
Cucumber	3.0	2.8	9.3	9.0
Lettuce	4.0	4.0	5.0	5.0
Onion	100	103	32	35.1
Pea	360	384	4	4.2
Peppers	14	12	18	16.3
Sweetcorn	50	61	14.5	15.9
Tomato	3.0	3.8	37	41
watermelon	4.5	5.1	0.3	3.5
celery	0.2	0.3	0.5	0.8
spinach/Swiss chard	15	18	0.7	0.8
Eggplant	0.8	0.8	0.45	0.5
Turnips	3.0	3.4	0.3	0.5
Asparagus	0.8	0.8	0.4	0.5
Spring onion	5.0	5.3	1.2	1.5
Herbs	0.8	1.0	0.5	0.8
Okra, artichoke, Rhubarb	3.0	4.0	0.3	0.5
TOTAL	1,053	1,138	218.9	241

Forage Crops

CROPS	SALES VOLUME IN METRIC TONS			SALES VALUE IN MILLIONS OF RAND	
	2000	2001	2002	2001	2002
Pearl Millet	550	800	700	1.9	3.9
Blue Buffalo Grass	30.5	30	20	1.2	1.2
Bottlebrush Grass	12	10	15	0.2	0.5
Oats	4,410	4,000	6,000	10.8	21.0
Kikuyu	8.5	5	12	1.5	4.2
Clovers	25	35	35	1.1	1.8
Triticale	1,550	600	300	1.6	1.4
Cocksfoot	10	10	10	0.25	0.4
Common Cynodon	35	35	50	1.75	2.3
Tall Fescue	40	40	60	1.0	1.3
Lupins	1,950	1,000	1,000	2.5	2.8
Lucern	750	750	600	22.5	21.0
Weeping Love Grass	450	800	300	11.0	9.0
Dallis Grass	5	10	12	0.5	0.3
Other legume Crops	390	150	150	5.0	5.5
Phalaris	9	5	5	0.17	0.2
Annual Rye Grass	1,500	1,000	1,000	8.0	10.0
Perennial Rye Grass	85	100	200	2.4	5.0
Rhodes Grass	190	50	25	2.0	1.2
Rye	700	1,250	1,500	3.75	6.0
Smuts Finger Grass	120	75	75	1.8	2.4
Teff	1,000	750	750	2.4	2.6
Fodder Radish	56	56	70	0.9	1.3
Forage Sorghum	2,000	1,200	1,200	3.4	5.4
Perennial Forage Sorghum	100	100	80	0.95	0.8
White Buffalo Grass	55	30	20	1.65	1.2
Cowpea		750	600	2.55	3.0
General	150	150	150	1.5	1.7
TOTAL	16,181	13,791	14,939	94.27	117

Trade

Seed Imports

SANSOR does not regulate imported seed. The seed must adhere to the minimum requirements as locally produced seed as stated by the Government's Registrar for Plant improvement. South Africa's seed industries are hubs for imported vegetable seeds, which are disseminated to neighboring countries. South Africa's seed industry saves more annually by importing seeds than locally producing them. Annual savings are estimated at about R400,000 for pea seed, R1.5 million for both sweet corn and bean seeds.

Seed Exports

Europe is the main main competition in the seed African market while also being an important export market for South Africa. South Africa plans to regain its former regional market share due to a number of comparative advantages namely,

- 1) South Africa's hot and dry climatic condition is an outstanding characteristic which ensures the production of good quality seed, that is free from bacterial infections and molding, which are problems experienced in countries with humid climates.
- 2) The cost of agronomic seed production is lower in South Africa as compared to high producing countries like Europe and the United States.
- 3) Because of food shortages in the SADC community, South Africa's expectation is a growing increase in its seed exports.
- 4) Currently, South Africa is only surplus producer of white maize seed in the African continent.

Policy

The Plant Improvement Act (Act 53 of 1976) has been reviewed, to include new regulations on seed testing and purity and germinations for smuts finger, white buffalo and Rhodes grass.

The objectives of this Act are: To create orderly trade in plant propagating material; Registration of seed cleaners, pre-packers and sellers, and prescribes minimum requirements for premises and seed; Ensures an official variety list; Seed certification for all crops; Requirements for labeling of seed containers, phytosanitary certificates, imports, and exports. It provides for accreditation of private seed testing laboratories, including disease testing. It prescribes maintenance of proper records, and official documents required for international seed trade. It set minimum standards for seed qualities destined for trade.

Plant Breeders Rights' Act(Act 15 of 1976) gives variety breeders and owners protection for a period of 5 years, which can be extended to 10 years.

The Agricultural Marketing Act (Act 59 of 1968) ensures marketing of agricultural commodities, which include seed trade.

While SANSOR is not a policy making body, it does influence policy, For example, in 2001 when the minister

of Agriculture wanted to increase tariffs on imported white maize seed, SANSOR convinced them not to implement the changes. Part of SANSOR's reason is that an open seed market ensures food security for all.

Labeling

The Plant Improvement Act of 1976 requires that all seed containers should be labeled with the name of the type of seed, variety, lot number, germination, physical purity, and the grade mass (if available). Small seed containers (packets), are exempt from purity, germination and size grade information.

Marketing

South Africa's seed market is subdivided into three categories, namely uncertified seed, certified seed, and seed not declared as seed by the Plant improvement Act. The seller of seed is legally responsible for meeting the minimum quality requirements (seed vigor, physical and generic purity, seed health, percentage germination/viability), and ensuring that the seed conforms with all information appearing on the container label.

South Africa, as a signatory to the International Plant Protection Convention (IPPC), uses phytosanitary requirements to control against new and problematic pests. Expectation are a review of phytosanitary import requirements to ensure more seed import.